IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) An animation method of deformable objects using an oriented material point and generalized spring model, the method comprising the following steps of: (a) modeling a structure of a deformable object into oriented material points and generalized springs; (b) initializing forces and torques acting on the material points, calculating the forces acting on the material points based upon external forces such as collision of the material points and gravity, accumulatively calculating the forces and torques acting on the material points with respect to all of the springs, adding the calculated forces and torques to the corresponding material points and executing numerical integration based upon calculation results in order to obtain new positions and postures of the material points; (c) updating positions, velocities, postures and angular velocities of the material points based upon the calculation results in the step (b), and displaying updated results regarding the offset of the material points; and (d) inspecting termination conditions, and if the termination conditions are not satisfied, repeating the steps (b) to (d);

wherein the oriented material point and generalized spring model has restoring forces against expansion, bending and twist of the springs, sets reference bending vectors and reference twist vectors of the material points with respect to the springs, and forms bending- and twist-restoring torques determined by length vectors of the springs and the reference vectors of the material points, and forms angular accelerations of the material points based upon the bending- and twist-restoring torques.

2. (Cancelled)

3. (Original) The animation method of deformable objects according to claim 1, wherein the step (c) applies offsets including rotational transformation and position transformation to the respective material points to output the material points in various forms as if they exist in offset positions.

4. (Original) The animation method of deformable objects according to claim 1, wherein the deformable objects are at least one of a group including one dimensional objects such as hair, two dimensional objects such as cloth, clothes and a flag, and three dimensional objects such as jelly and a tube.

5. (Original) The animation method of deformable objects according to claim 1, wherein the step (c) comprises: storing data about positions of the material points obtained in the step (b).